

Rough Draft

17 November 1961

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STAFF STUDY - SPECIAL FURNITURE AND APPARATUS
CONTRACT [] ASSIGNMENT II, TECHNICAL DIRECTIVE #3OBSOLETE D by PJD
21 Feb 62I. Statement of the Problem:

There is a general need to improve methods of operation through the creation of effective human environments. Specific problems in various work areas as outlined below indicates more efficient operator function can be achieved by properly designed or selected functional apparatus (fixed or mobile furniture and accessory equipment). In addition, significant graphic markings should be included where necessary and human engineering in work areas where controls and work operations are necessary.

II. Facts Bearing on the Problem:

There are many unique functional problems that will occur in new building operations. These special problems will require special apparatus to facilitate such things as (1) speed, accuracy and transfer of data (2) special handling systems for security requirements, (3) special graphic markings to facilitate security control, etc. For those areas listed below, much of the apparatus (furniture, etc.) should be designed for specific functions in order to allow effective and efficient work operations as well as satisfying security requirements wherever necessary. In other areas, commercially available items can be utilized as is or with minor modifications. This program includes a study and design development to create better methods of operation, functionally and psychologically.

III. Recommendations:

It is our recommendation that this program proceed according to the scope of work outlined as follows:

A. General Scope to Include:

1. conceptual and investigation study
2. design development of special apparatus and vendor contract fabrication details; (a) specification (b) working drawings of custom design

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3. purchasing of commercially available items or supervision of custom design fabrication to be determined.

B. General Criteria for:

1. Human engineering efficiency:
 - a. convenience
 - b. accuracy
 - c. speed
2. Manufacturing:
 - a. investigation for commercially standard equipment wherever possible; if not available to suit function or cost, equipment will have to be custom designed.
 - b. relatively low quantity requirements for each equipment are such that the probability is that development costs will be necessary by the vendor. Therefore, development should be retained as a function of this program.
 - c. investigation might indicate that total custom fabrication is as feasible as a part custom-part standard approach.
3. Aesthetics based on functional and psychological determination, rather than arbitrary "style" judgment.

C. Projects to be Considered:

1. Illustrators and graphic analysts work space -- full development of typical work station (similar to scheme "E").
 - a. integral drawing and light table to facilitate transfer of critical data with ease, accuracy and speed.
 1. single common adjustment as compared with individual double adjustments.
 2. common angular adjustments.
 3. variable height adjustment for desk height sitting to standing position.

4. probability is that a commercial integral unit is not available; therefore, alternatives are:

modify a standard unit with new integral unit top or custom design a complete unit.

- b. portable illustrators and analysts equipment cart for:

1. optimum size and use.

2. equipment:

receptacles for brushes, pencils, etc.
built in sharpeners.
artists aids.
adjustable shelves.
stereo, microscope.
x

- c. integral reference table with built-in flat file for optimum use. Alternative approaches are commercially available or custom design.

1. reference table and work table

2. flat file storage to be determined

3. miscellaneous storage

- d. multi-purpose office desks - investigate for commercial units (unitized unless manufacturing economy and maximum function can be achieved through total custom system.

- e. chairs and drafting stools - selection of commercially available type.

- f. miscellaneous accessories - by I. O.

- g. supporting equipment:

1. layout tables - may need custom because of special of special size and flexibility requirements.

2. special light table - selection of commercially available type.

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3. cutting table and stand with paper cutter and trash receptacle.
 4. air brush area.
 5. 15' vertical drawing board - requirement to be determined.
2. Third Floor Work Stations (fifth floor to be determined)
- A. Optimum functional furniture configuration for maximum flexibility of operations.
1. combination integral light and work table to be used by both operators.
 2. work table adjacent to item 1., for efficient operation and storage of stereomicroscope, etc. (one for each operator).
 3. office desk and chair (each operator) commercially available.
 4. supplementary work table for miscellaneous activity (each operator)
 5. general and special storage cabinet (each operator)
 6. miscellaneous furniture to be determined.
3. Guard Stations
- A. Integration of control system with security facilities for:
1. efficient and quick control.
 2. release and acquisition of badges.
 3. traffic control.
- B. Master station requires systematized grouping of all controls and alarm for control function of entire building,

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including temperature controls, etc., including master station at night security office

- C. Human engineer for quick and efficient signal and instructions for relatively untrained personnel

4. Interior Work

- A. Area markings for ease in identification, continuity (color coding and symbols) and integration with master control system.
- B. Graphics (signs).
- C. Investigation for theater seat for flexibility, mobility, and function - including writing surface and comfort; may be commercial or custom.
- D. Human factors in special areas.

5. Mail cart for pick up and distribution in each area or outgoing.

- A. Specialized cart for packages.
- B. Separation of unclassified and classified (in concealed areas) mail.
- C. Function for service to all areas of building.

6. Special function furniture

- A. Wrapping, shipping and receiving area.
- B. Special material handling equipment.

7. Display and presentation area - 6th floor briefing room.

- A. Group presentation.
- B. Executive presentation.
- C. General presentation.
- D. Visual control in case of emergency.

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IV. Schedule:

It will require 4 calendar months to complete the scope of the design program outlined above. The conclusion to this program will provide working drawings which can effect a subsequent program involving investigation for manufacturing and bids, purchasing and supervision. This phase of work will be estimated at the completion of the above design program.

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V. Manpower Requirements:

Senior engineer	1 Man Month
Three senior staff industrial designers	4 Man Month
Clerk steno	<u>1 Man Month</u>
Total	14 Man Month



Vendor contract regarding purchasing and supervision will be determined subsequent to the completion of this program.

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